1. Record Nr. UNINA9910431348703321

Titolo	Forensic DNA Typing: Principles, Applications and Advancements / / edited by Pankaj Shrivastava, Hirak Ranjan Dash, Jose A. Lorente, Jahangir Imam
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-6655-0
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (X, 685 p. 129 illus., 110 illus. in color.)
Disciplina	347
Soggetti	Microbial genetics Forensic sciences Plant genetics Agriculture Genetics Microbial Genetics Forensic Science Plant Genetics Genetics and Genomics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Forensic DNA Typing: Inception, Methodology and Technical Advancements -- Chapter 2. STR Typing and Available Multiplex kits Including Validation methods -- Chapter 3. Sequential Advancements of DNA Profiling: An Overview of Complete Arena -- Chapter 4. Forensic DNAevidence: From Crime Scene to Conviction -- Chapter 5. RNA and DNA Based Identification of Body Fluids -- Chapter 6. Statistical softwares used in evaluation of Forensic DNAtyping -- Chapter 7. Ancient DNA analysis and its relevance in forensic DNA fingerprinting -- Chapter 8. Analyses of Second World War skeletal remains using a forensic approach -- Chapter 9. Molecular tools for analysis of Archaeological and Prehistoric Human Bones: a perspective of anthropological and forensic relevance -- Chapter 10. Usefulness of Mini-STRs in analyzing degraded DNA samples and their forensic relevance.-Chapter 11. Capillary electrophoresis issues in forensic DNA

typing -- Chapter 12. Human trafficking and DNA analysis -- Chapter 13. Autosomal STR Typing and Case Studies -- Chapter 14. Y Chromosome Short Tandem Repeats Typing -- Chapter 15. X-STRs: Potentials and Applications -- Chapter 16. Applications of Mitochondrial DNA in Forensic Science -- Chapter 17. SNP in Forensic DNA Testing -- Chapter 18. SNP Testing in Forensic Science -- Chapter 19. DNA analysis of domestic animals -- Chapter 20. DNA forensics in combating illegal wildlife trade: present, past and future perspectives -- Chapter 21. The utility of DNA Barcoding Technology in the Authentication of Medicinal Plants in Illegal Trade: A critical review -- Chapter 22. DNA barcoding in forensic mycology: concepts, limitations and future prospects -- Chapter 23. Applications of Next Generation Sequencing in forensic field -- Chapter 24. Utility and possibility of Next-Generation Sequencing in Forensic DNA typing -- Chapter 25. Oral Microbes: A hidden yet powerful evidence for futuristic forensic investigation -- Chapter 26. MALDITOF the 4th generation techniques still at its infancy to identify forensically important insects -- Chapter 27. Forensic DNA Phenotyping -- Chapter 28. Rapid DNA typing -- Chapter 29. Guidelines for collection and preservation of samples for Forensic DNA testing -- Chapter 30. Quality Control in Forensic DNA Typing -- Chapter 31. Legal aspects of Forensic DNA typing -- Chapter 32. DNA Databases -- Chapter 33. Building of the World's Largest DNA Database: the China Case -- Chapter 34. DNA Databases: Risks, Benefits, Privacy, and Human Rights.

Sommario/riassunto

The book explores the fundamental principles, advances in forensic techniques, and its application on forensic DNA analysis. The book is divided into three modules; the first module provides the historical prospect of forensic DNA typing and introduces fundamentals of forensic DNA typing, methodology, and technical advancements, application of STRs, and DNA databases for forensic DNA profile analysis. Module 2 examines the problems and challenges encountered in extracting DNA and generating DNA profiles. It provides information on the methods and the best practices for DNA isolation from forensic biological samples and human remains like ancient DNA, DNA typing of skeletal remains and disaster victim identification, the importance of DNA typing in human trafficking, and various problems associated with capillary electrophoresis. Module 3 emphasizes various technologies that are based on SNPs, STRs namely Y-STR, X-STR, mitochondrial DNA profiling in forensic science. Module 4 explores the application of non-human forensic DNA typing of domestic animals, wildlife forensics, plant DNA fingerprinting, and microbial forensics. The last module discusses new areas and alternative methods in forensic DNA typing, including Next-Generation Sequencing, and its utility in forensic science, oral microbes, and forensic DNA phenotyping. Given its scope, the book is a useful resource in the field of DNA fingerprinting for scientists, forensic experts, and students at the postgraduate level.

2. Record Nr. UNINA9910590074203321

Titolo	Advances in Agricultural and Industrial Microbiology : Volume-2: Applications of Microbes for Sustainable Agriculture and in-silico Strategies / / edited by Suraja Kumar Nayak, Bighneswar Baliyarsingh, Ashutosh Singh, Ilaria Mannazzu, Bibhuti Bhusan Mishra
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-16-9682-9
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (265 pages)
Collana	Biomedical and Life Sciences Series
Disciplina	579
Soggetti	Microbiology Agriculture Industrial microbiology Industrial Microbiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Plant Growth Promoting Rhizobacteria for Sustainable Agriculture -- Chapter 2. Plant Microbes Interactions and Its Effect on Crop Productivity -- Chapter 3. Rhizobacterial biostimulants: efficacy in enhanced productivity and sustainable agriculture -- Chapter 4. The Role of Arbuscular Mycorrhiza in Sustainable Agriculture -- Chapter 5. Biocontrol Efficacy of Biomass and Secondary Metabolites of P. fluorescens Against Predominant Pest Affecting Agricultural Fields -- Chapter 6. Exopolysaccharide-producing Azotobacter for bioremediation of heavy metal-contaminated soil -- Chapter 7. Utilization of Arbuscular Mycorrhizal Fungi to boom the Efficiency and Product nature of Horticultural Crops -- Chapter 8. Microbial Remediation of Persistent Agrochemicals -- Chapter 9. Microbes Based Pesticides for Insect Pest Control and Their Management -- Chapter 10. In-silico Tools and Approach of CRISPR Application in Agriculture -- Chapter 11. Application of Bioinformatics in the Plant Pathology Research -- Chapter 12. New Age Genomic Measures for Uncovering Plant-Microbiome Interactions: Tools, Pipelines and Guidance Map for Genomic Data Mining -- Chapter 13. Bioinformatics: A Tool for

Sustainable Agriculture -- Chapter 14. Recent Advances in Deep Learning CNN Models for Plant Disease Detection.

Sommario/riassunto

This book, the second volume of Advances in Agricultural and Industrial Microbiology is the compilation of modern technologies with scientific advancement in promoting plant growth by rhizobacterial biostimulants, endophytic microbes, and arbuscular mycorrhizal fungi. The volume also highlights the critical roles of soil microbes in the biocontrol of plant pathogens/diseases, bioremediation of toxic agrochemicals, and nitrogen fixation. Agricultural sustainability and environmental management strongly depend on microbial communities. Management of soil fertility is the key aspect that is facilitated by soil microbes and their interactions.The book also has a section focuses on the in-silico approaches and techniques involved in agriculture which enhances the readers' understandings of plant-pathogen interactions, prediction of pathogenicity, improving variety through CRISPER, and its role in the agroindustry. Additionally, the interventions of ICTs (Information and Communication Technologies) have benefited agricultural stakeholders, i.e., farmers to policymakers, in predicting and combating them. The covered topics of the microbial domain and computational tools have high implications for the researchers, students, faculty, and scientists working on these areas.